AUTHOR INDEX

VOLUME 16 (1972)

ALLISON, A. C., 332 ALLISON, M. J., 243 ARLETT, C. F., 301

Baimai, V., 373
Ball, C. R., 381
Bauchinger, M., 307, 401, 407
Benson, E. S., 195
Berg, H. W. van den, 381
Bernheim, N. J., 77
Bernstein, C., 113
Bernstein, H., 113
Böhme, H., 133
Bradt, C., 340
Bridges, B. A., 225
Busby, N., 49
Buselmaier, W., 189

CLIVE, D., 77 Cox, B. S., 353

Davies, D. J. G., 1, 345 Deering, R. A., 318 Dubinin, N. P., 249 Dyer, K. F., 327

ESSER, K., 417

FARRELL, E., 340 FLAMM, W. G., 77 FRANSSEN, M., 141

GAME, J. C., 353 GEE, P. A., 203, 215 GICHNER, T., 35 GOLDEN, B. R., 222 GREEN, M. H. L., 225 GREEN, M. M., 59

Hall, G., 401
Hanna, P. J., 327
Harcourt, S. A., 301
Harm, W., 121
Harold, R. J., 27
Hatcher, N., 428
Healy, K., 428
Hoffman, A. C., 175
Holzberg, S., 289
Hook, E. B., 428
Hopwood, D. A., 27
Hug, O., 307

Ishii, Y., 13

Jacobs, A. J., 420 Jacobs, J. J. J. A. A., 413

KADA, T., 165 KELLY-GARVERT, F., 112 KHALIZEV, A. E., 89 KJELLÉN, L., 340 KONDO, S., 13 KURENNAYA, O. N., 249 KURLAPOVA, L. D., 249

LEE, W. R., 195, 203, 215 LEFEVRE JR., G., 59 LEGATOR, M. S., 112 LÉONARD, A., 297 LINDEN, G., 297 LÜERS, H., 337 LUSS, E. V., 89

Machesko, M. R., 77 Mandeville, W. F., 151 Manuilova, E. S., 89 Mauer, I., 391 Mohan Rao, P. K., 322 Moss, S. H., 1, 345 Moutschen, J., 141 Mufti, S., 113

Nečas, J., 265 Nichols, W. W., 340 Nishioka, H., 121 Nondasuta, A., 373

Ове, G., 337 O'Brien, R. L., 420

PALMER, K. A., 112 PAOLILLI, P., 420 PARKER, D. R., 49 PARKER, J. W., 420 PATON, G. R., 332 PAUCKER, K., 340 PAYEZ, J. F., 318 PETROVA, O. N., 89 PETROVA, S. A., 103 PIETRUCK, S., 401 Powers, M. L., 428 PRILLINGER, H., 417 PROMCHAINANT, C., 373 Propping, P., 189 PROUST, J. P., 65 PYATKIN, E. K., 103

RÖHRBORN, G., 189 ROTHWELL, M. A., 225 SADAIE, Y., 165
SANKARANARAYANAN, K., 65
SCHMID, E., 307, 401, 407
SCHMIDT, D., 407
SCHRÖDER, J. H., 289
SEGA, G. A., 195, 203, 215
SHAPIRO, N. I., 89
SHUKLA, P. T., 363
SINGH, C. B., 279
SOARES, E. R., 425
SOBELS, F. H., 65
SOLOMON, H. M., 391
STEL, J. J. VAN DER, 413
STROM, B., 113
SUSKOV, I. I., 103
SWIETLINSKA, Z., 41

Tarasov, V. A., 249 Tutikawa, K., 165 Tyrrell, R. M., 1, 345

Varshaver, N. B., 89 Velemínský, J., 35 Vig, B. K., 151 Vogel, E., 157 Voogd, C. E., 413 Vorobyev, A. I., 103

WEINSTEIN, D., 391 WITKIN, E. M., 235 WITTE, W., 133

ZIMMERING, S., 222

SI

MU

VO

Ac Ac Ac

Ac Ac

Ad

Af Af

Al Al Al

4-5-

> A A

A A

A

A

8-

B

EX

SUBJECT INDEX

VOLUME 16 (1972)

Acetylarsan, in human cell cultures, 332 Acid red, rec assay in B. subtilis, 165

Acid violet 6B, rec assay in B. subtilis, 165 Acridine orange, rec assay in B. subtilis, 165

Actinomycin-D, in D. melanogaster females, mated to X-irradiated males, 65

Adenine, photoenzymatic repair in E. coli, 121 Adenine-N'-oxide, photoenzymatic repair in E. coli, 121

Adenosine, photoenzymatic repair in E. coli, 121

Adenosine mono-, di- and tri-phosphate, photoenzymatic repair in E. coli, 121

Adenovirus, induced damage, inhibition by interferon, 340

Aflatoxin, and γ -rays in human leucocytes, 373 Aggressiveness, male, in Cichlasoma nigro-

fasciatum, following X-irradiation, 289 Alga, N-ethyl-N-nitrosourea in, 265

Alum, in Glycine max, 151

Amaranth, rec assay in B. subtilis, 165

Amino black 10B, rec assay in B. subtilis, 165 δ-Aminolaevulinic acid, in action of lead in human peripheral lymphocytes, 401

-, in chromosome analysis of policemen with increased blood lead level, 407

4-Aminopyrazolopyrimidine, photoenzymatic repair in E. coli, 121

5-Aminouracil, -synchronized root meristems of V. faba, aberrations induced by diepoxybutane, 41

Ammonium tellurate, in human cell cultures,

Anaphase figures, method for preparing, in rat bone marrow, 111

Antifertility activity, of trimethylphosphate in D. melanogaster, 327

Antimony sodium tartrate, in human cell cultures, 332

Ascomycete, use of spermatia in production of mutants, 417

Assay, host-mediated, isoniazid and hydrazine in mammalian test systems, 189

Assay system, using thymidine kinase locus in mouse lymphoma cells, 77

8-Azaadenine, photoenzymatic repair in E. coli,

8-Azaguanine, resistant mutants in cultured Chinese hamster cells, UV-irradiation, 301

Bacillus subtilis, chemical mutagens, rec assay,

Barley, seeds, storage of, treated with propyl and isopropyl methanesulphonate, 35

Barley, (continued)

—, X-irradiation and diethyl sulphate, 322 Beryllium sulphate, in human cell cultures, 332 Bioassay, tissue-mediated, for chemical

mutagens, comparison of a chemical assay with, 215

N, N-Bis(2-chloroethyl)-N', O-propylenephosphoric acid ester diamide, in mouse spermatogonia, 297

2,2-Bis(p-chlorophenyl)acetic acid, in D. melanogaster, 157

2,2-Bis(p-chlorophenyl)ethanol, in D. melanogaster, 157

1,4-Bis(methanesulphonoxy)butane, in mouse spermatogonia, 297

Blood, cells, cultured, from newborn infants, chromosome breakage, 428

-, human, with increased blood lead level, chromosome analysis, 407

Bone marrow, human, therapeutical local y-irradiation, 103

-, rat, method for preparing anaphase figures, III

Bracon hebetor, ethyl methanesulphonate and y-irradiation, 175

Brilliant noble FCF, rec assay in B. subtilis, 165 Bromocresol green, rec assay in B. subtilis, 165 5-Bromodeoxyuridine, assay system using the thymidine kinase locus in mouse lymphoma cells, 77

, in Chinese hamster cells, 89

2-Bromoethanol-1, in Klebsiella pneumoniae,

5-Bromouracil, in Klebsiella pneumoniae, 413 Broth, effect of, on UV-induced mutation in E. coli strains, 225

Cadmium chloride, in human cell cultures, 332 Caffeine, effects on cellular slime mold strains treated with alkylating agents, 318

-, in human lymphocytes, 391

-, in Klebsiella pneumoniae, 413

-, in Proteus mirabilis after UV and nitrogen mustard, 133

—, rec assay in B. subtilis, 165

-, in UV-induced instability in S. pombe, 249 Carbon-14, transmutation of, within DNA of D. melanogaster spermatozoa, 195

Carcinogen, methylazoxymethanol acetate, in HeLa cells, 381

Carmine, rec assay in B. subtilis, 165 β -Carotene, rec assay in B. subtilis, 165 Chinese hamster, cells, gene mutation, 89

—, UV-irradiated cells, 301

Chloramphenicol, in ethyl methanesulphonateand y-radiation-treated Bracon hebetor, 175 Chlorella kessleri, N-ethyl-N-nitrosourea in, 265 2-Chloroethanol-1, in Klebsiella pneumoniae,

Chloromycetin, rec assay in B. subtilis, 165 6-Chloropurine, photoenzymatic repair in E. coli, 121

Chromosome analysis, of policemen with increased blood lead level, 407

breakage, in cultured blood cells from newborn infants, 428

Cichlasoma nigrofasciatum, behavioural mutagenesis following X-irradiation, 289

Cichlid, convict, fish, behavioural mutagenesis, following X-irradiation, 289

Citrobacter freundii 425, dichlorvos, 413 Cobalt nitrate, in human cell cultures, 332 Complementation testing, of UV-sensitive mutants of S. coelicolor, rapid method, 27

Conidia, of N. crassa, exposed to UV in phosphate buffer, 243

Copper sulphate, in ethyl methanesulphonateand y-radiation-treated Bracon hebetor, 175 , in Glycine max, 151

Crystal violet, rec assay in B. subtilis, 165 Cysteine, in ethyl methanesulphonate- and y-radiation-treated Bracon hebetor, 175 Cytosine, photoenzymatic repair in E. coli, 121

Deoxyadenosine, in ethyl methanesulphonateand γ-radiation-treated Bracon hebetor, 175

De Sanctis-Cacchione syndrome, 4-nitroquinoline 1-oxide-induced damage, 420 Dichloroacetic acid, in Klebsiella pneumoniae,

1,1-Dichloro-2,2-bis(p-chlorophenyl)ethane, in D. melanogaster, 157

1,1-Dichloro-2,2-bis(p-chlorophenyl)ethylene, in D. melanogaster, 157

2,2-Dichloro ethanol-1, in Klebsiella pneumoniae, 413

Dichlorvos, in bacteria, 413

Dictyostelium discoideum, treated with alkylating agents, effects of caffeine, 318 Diepoxybutane, in 5-aminouracil-synchronized root meristems of V. faba, 41

Diethyl sulphate, and X-irradiation, in barley,

6-Dimethoxyaminopurine, photoenzymatic repair in E. coli, 121

Dimethylparamine, rec assay in B. subtilis, 165 Dimethylsulphoxide, in D. melanogaster, 157

-, in human leucocytes, 373 Dimethyl yellow, rec assay in B. subtilis, 165 2,4-Dinitrophenol, in ethyl methanesulphonate-

and y-radiation-treated Bracon hebetor, 175 Disodium hydrogen orthophosphate, in

UV-exposed N. crassa, 243 Drosophila melanogaster, analysis of mutagen specificity, 363

-, antifertility activity of trimethylphosphate,

-, behaviour of quasi-bivalents formed by heterologous interchange at meiosis, 222

Drosophila melanogaster (continued)

—, DDT and metabolites, 157

-, females, treated with actinomycin-D, mated to X-irradiated males, 65

—, genetic indicator for ethyl methanesulphonate in Mesocricetus auratus, 215

-, mature oocytes, interchange following X-irradiation, 49

-, mutator gene-induced X-linked lethals, 59 -, spermatozoa, dosimetry of ethyl methane-

sulphonate, 203 -, transmutation of carbon-14 within DNA of, 195

Enterobacter aerogenes, dichlorvos, 413 Eosine G and Y, rec assay in B. subtilis, 165 Epibromo-, epichloro- and epifluorohydrine, in Klebsiella pneumoniae, 413 Epistatic interactions, between four rad loci in

yeast, 353 Erythrosine, rec assay in B. subtilis, 165

Escherichia coli, dichlorvos, 413 -, K12, effect of broth on UV-induced

mutation, 225

-, -, variation in photoreactivating enzyme activity, 345

-, variation in UV sensitivity as function of stage of growth, I

-, mutation stimulation in phage T₄ by lesions in gene 32 and thymidine imbalance, 113 -, phloxine, 165

-, photoenzymatic repair of UV lesions, 121 -, spontaneous and radiation-induced delation

mutations, 13 -, UV mutagenesis in repair-deficient derivatives, 235

N-Ethylmaleimide, in ethyl methanesulphonate- and γ -radiation-treated Bracon hebetor, 175

Ethylmethanesulphonate, assay system using the thymidine kinase locus in mouse lymphoma cells, 77

-, in Bracon hebetor, 175

-, in B. subtilis, 165

-, in D. discoideum, effects of caffeine, 318

-, in D. melanogaster spermatozoa, dosimetry, 203

-, in Mesocricetus auratus, 215

-, in mice, uterine dissection, 425

—, in Oryza sativa, 279

-, in Podospora anserina, 417

storage of barley seeds treated with, 35 N-Ethyl-N-nitrosourea, effects on Chlorella cells, 265

-, in Pogonatum aloides, 141

Expression time, mutation frequency in UV-irradiated Chinese hamster cells, 301

Fast blue RR, rec assay in B. subtilis, 165 Fast green FGF, rec assay in B. subtilis, 165 Ferrous sulphate, in Glycine max, 151 Fish, convict cichlid, behavioural mutagenesis

following X-irradiation, 289 Foetus, human, inhibition of virus-induced damage by interferon, 340

H

SU

Ge

Ge

Ge

Gl

Gl

G

H

H

ated

EX

59 ine-

, in i in

me ion

ons 21 on

10ng

y,

is

Genetic map, of gene 32, in phage T4, 113 Gentian violet B, rec assay in B. subtilis, 165 Germ cells, of D. melanogaster, DDT and metabolites, 157

Glutathione, in ethyl methanesulphonate- and y-radiation-treated Bracon hebetor, 175

Glycine max, metallic salts, 151

Guanine, photoenzymatic repair in E. coli, 121

Habrobracon juglandis, ethyl methanesulphonate and γ -irradiation, 175

Hamster, bioassay for chemical mutagens, 215 Hordeum vulgare, X-irradiation and diethyl sulphate, 322

Human, bone marrow, therapeutical local y-irradiation, 103

-, cell cultures, damage induced by metal salt,

, chromosomes, inter- and intrachromosomal distribution of achromatic lesions and chromatid breaks, 337

-, cultured blood cells from newborn infants, chromosome breakage, 428

-, foetuses, inhibition of virus-induced damage by interferon, 340

-, HeLa cells, effect of methylazoxymethanol acetate, 381

-, with increased blood lead level, chromosome analysis, 407

—, interferon, inhibition of virus-induced chromosome damage, 340

-, leucocytes, aflatoxin and γ -rays, 373

-, lymphocytes, aberrations after X-irradiation, 307

—, —, effect of caffeine, 391

-, -, peripheral, action of lead, 401

-, -, Xeroderma pigmentosum, 4-nitroquinoline 1-oxide-induced damage, 420

Hycanthone methanesulphonate, assay system using the thymidine kinase locus in mouse

lymphoma cells, 77 Hydrazine, in D. melanogaster, 363 , in mammalian test systems, 189 Hydroxylamine, in B. subtilis, 165

, in D. melanogaster, 363

p-Hydroxymercuribenzoate, in ethyl methanesulphonate- and γ-radiation-treated Bracon hebetor, 175

Indigo carmine, rec assay in B. subtilis, 165 Inosine, photoenzymatic repair in $E.\ coli$, 121 Insecticides, DDT and metabolites, in

D. melanogaster, 157 Interferon, inhibition of virus-induced chromosome damage by, 340

2-Iodoethanol-1, in Klebsiella pneumoniae, 413 Iron dextran, in human cell cultures, 332

Irradiation, β , transmutation of carbon-14 within DNA of D. melanogaster spermatozoa 195

-, γ, in Bracon hebetor, 175

-, -, in human bone marrow cells, 103

-, -, in human leucocytes, 373 —, —, in Oryza sativa, 279

—, γ and UV, rec assay for screening chemical mutagens, 165

Irradiation (continued)

-, UV, in Chinese hamster cells, 301

-, -, effect of phosphate buffer on response in N. crassa to, 243

loci in yeast, 353 —, epistatic interactions between four rad

-, -, followed by caffeine, in Proteus mirabilis, 133

-, induced mutation in E. coli strains, effect of broth on, 225

—, inducing replicating instability in S. pombe, 249

—, —, mutagenesis in repair-deficient derivatives of E. coli, 235

E. coli, 121 —, photoenzymatic repair by single light in

-, photoreactivating enzyme activity in E. coli strains, 345

-, sensitive mutants of S. coelicolor, rapid method for complementation testing, 27

-, -, variation in UV sensitivity of E. coli strains as function of stage of growth, I

-, -, in Xeroderma pigmentosum patients, 420

-, UV and X, in Chinese hamster cells, 89

—, —, in E. coli strains, 13

-, X, assay system using the thymidine kinase locus in mouse lymphoma cells, 77

, in Cichlasoma nigrofasciatum,

behavioural mutagenesis, 289 —, —, and diethyl sulphate in barley, 322

-, -, of D. melanogaster males, mated to actinomycin-D-treated females, 65

-, -, in human lymphocytes, 307

-, interchange in mature oocytes of

D. melanogaster, 49

, quasi-bivalents formed by heterologous interchange at meiosis in D. melanogaster,

Isoniazid, in human chromosomes, 337 , in mammalian test systems, 189 Isopropyl methanesulphonate, in mouse spermatogonia, 297

-, storage of barley seeds treated with, 35

Janus green B, rec assay in B. subtilis, 165

Kalibor, rec assay in B. subtilis, 165 Kanamycin, rec assay in B. subtilis, 165 Kidney, hamster, bioassay for chemical mutagens, 215

-, human foetuses, inhibition of virus-induced damage by interferon, 340

Klebsiella pneumoniae, dichlorvos, dichloroacetic acid, methyl-, triethyl- and trimethylphosphate, 413

Lead, in human peripheral lymphocytes, 401 , increased level of, chromosome analysis of human blood, 407

Leucocytes, human, aflatoxin and γ-rays, 373 Light green SF, rec assay in B. subtilis, 165 Lincomycin, rec assay in B. subtilis, 165 Liquid holding, variation of UV sensitivity of

E. coli as function of stage of growth, I

Liver, and lung, hamster, bioassay for chemical mutagens, 215

Lung, human foetuses, inhibition of virusinduced damage by interferon, 340

Lymphocytes, human, aberrations after X-irradiation, 307

-, —, action of lead, 401

—, —, effect of caffeine, 391

-, -, with increased lead level, chromosome analysis, 407

-, Xeroderma pigmentosum, 4-nitroquinoline 1-oxide-induced damage, 420

Lymphoma cells, of mouse, mutational assay system using the thymidine kinase locus, 77

Mammal, comparison of a chemical assay with a tissue-mediated bioassay for chemical mutagens, 215

-, cultured, gene mutation in Chinese hamster cells, 80

, isoniazid and hydrazine, 189

Meiosis, in D. melanogaster, behaviour of quasi-bivalents formed by heterologous interchange, 222

6-Mercaptopurine, photoenzymatic repair in E. coli, 121

Mercuric chloride, in human cell cultures, 332 Mercury chloride, rec assay in B. subtilis, 165 Mesocricetus auratus, bioassay for chemical mutagens, 215

Metallic salts, in Glycine max, 151

Metal salt, damage in human cell cultures, 332 Method for preparing anaphase figures, from rat bone marrow, 111

Methylazoxymethanol acetate, in HeLa cells,

Methylene blue, rec assay in B. subtilis, 165 Methyl ethylketone, in comparison of assays for chemical mutagens, 215

Methyl green, orange and yellow, rec assay in B. subtilis, 165

Methyl methanesulphonate, in mouse spermatogonia, 297

N-Methyl-N'-nitro-N-nitrosoguanidine, in B. subtilis, 165

-, in Podospora anserina, 417

-, rapid method for complementation testing of UV-sensitive mutants of S. coelicolor, 27 N-Methylnitrosourea, in Pogonatum aloides, 141 , storage of barley seeds treated with, 35 Methylphosphate, in Klebsiella pneumoniae, 413 6-Methylpurine, photoenzymatic repair in

E. coli, 121 Mitomycin C, in B. subtilis, 165

, with metallic salts in Glycine max, 151

Mold, slime, cellular, treated with alkylating agents, effects of caffeine, 318

Moss, N-ethyl- and N-methylnitrosourea, 141 Mouse, chemical mutagens and phloxine, 165

-, dominant lethals by uterine dissection after ethyl methanesulphonate, 425

—, interferon, inhibition of virus-induced chromosome damage, 340

 isoniazid and hydrazine in mammalian test systems, 189

Mouse (continued)

—, lymphoma cells, mutational assay system using the thymidine kinase locus, 77

-, spermatogonia, chemical mutagens, 297

-, Swiss, host-mediated assay, dichlorvos and S. typhimurium, 413

Mutagen, acetylarsan, in human cell cultures, 332

-, acid red, rec assay in B. subtilis, 165

-, acid violet 6B, rec assay in B. subtilis, 165

--, acridine orange, rec assay in B. subtilis, 165

—, actinomycin-D, in D. melanogaster females, mated to X-irradiated males, 65

-, adenine and adenine-N'-oxide, adenosine and adenosine mono-, di- and triphosphate, photoenzymatic repair in E. coli, 121

—, aflatoxin, and γ-rays in human leucocytes,

-, alum, in Glycine max, 151

—, amaranth, rec assay in B. subtilis, 165

-, amino black 10B, rec assay in B. subtilis, 165

—, 4-aminopyrazolopyrimidine, photoenzymatic repair in E. coli, 121

-, 5-aminouracil, -synchronized root meristems of V. faba, diepoxybutane treatment, 41

-, ammonium tellurate, in human cell cultures

-, antimony sodium tartrate, in human cell cultures, 332

-, 8-azaadenine, photoenzymatic repair in E. coli, 121

-, 8-azaguanine, resistant mutants in cultured Chinese hamster cells, UV-irradiation, 301

beryllium sulphate, in human cell cultures,

 33^2 –, N,N-bis(2-chloroethyl)-N',O-propylenephosphoric acid ester diamide, in mouse spermatogonia, 297

—, 2,2-bis(p-chlorophenyl)acetic acid, in D. melanogaster, 157

—, 2,2-bis(p-chlorophenyl)ethanol, in D. melanogaster, 157

-, 1,4-bis(methanesulphonoxy)butane, in mouse spermatogonia, 297

-, brilliant noble FCF, rec assay in B. subtilis,

-, bromocresol green, rec assay in B. subtilis,

-, 5-bromodeoxyuridine, assay system using the thymidine kinase locus in mouse lymphoma cells, 77

-, in Chinese hamster cells, 89

-, 2-bromoethanol-1, in Klebsiella pneumoniae

-, 5-bromouracil, in Klebsiella pneumoniae,

-, broth, effect of, on UV-induced mutation in E. coli strains, 225

-, cadmium chloride, in human cell cultures, 332

-, caffeine, effects on cellular slime mold strains treated with alkylating agents, 318

—, —, in human lymphocytes, 391

-, -, in Klebsiella pneumoniae, 413

Mutagen, caffeine (continued)

—, —, in *Proteus mirabilis* after UV and nitrogen mustard, 133

—, —, rec assay in B. subtilis, 165

—, —, in UV-induced instability in S. pombe,

-, carmine, rec assay in B. subtilis, 165

—, β-carotene, rec assay in B. subtilis, 165
 —, chloramphenicol, in ethyl methanesulphonate- and γ-radiation-treated Bracon hebetor, 175

-, 2-chloro- and 2,2-dichloroethanol-1, in Klebsiella pneumoniae, 413

- —, chloromycetin, rec assay in B. subtilis, 165
 —, 6-chloropurine, photoenzymatic repair in E. coli, 121
- —, cobalt nitrate, in human cell cultures, 332
 —, copper sulphate, in ethyl methanesulphonate- and γ-radiation-treated Bracon hebetor, 175

-, -, in Glycine max, 151

1

1

—, crystal violet, rec assay in B. subtilis, 165—, cysteine, in ethyl methanesulphonate- and γ -radiation-treated $Bracon\ hebetor$, 175

—, cytosine, photoenzymatic repair in E. coli,

—, deoxyadenosine, in ethyl methanesulphonate- and γ -radiation-treated Bracon hebetor, 175

—, dichloroacetic acid, in Klebsiella pneumoniae, 413

- —, 1,1-dichloro-2,2-bis(p-chlorophenyl)ethane, in D. melanogaster, 157
- —, 1,1-dichloro-2,2-bis(p-chlorophenyl)ethylene, in D. melanogaster, 157

—, dichlorvos, in bacteria, 413

—, diepoxybutane, in 5-aminouracil-synchronized root meristems of V. faba, 41

—, diethyl sulphate, and X-irradiation, in barley, 322

—, 6-dimethoxyaminopurine, photoenzymatic repair in *E. coli*, 121

—, dimethylparamine, rec assay in B. subtilis, 165

-, dimethylsulphoxide, in D. melanogaster, 157

—, —, in human leucocytes, 373

—, dimethyl yellow, rec assay in B. subtilis, 165
 —, 2,4-dinitrophenol, in ethyl methanesulphonate- and γ-radiation-treated Bracon hebetor, 175

—, disodium hydrogen orthophosphate, in UV-exposed N. crassa, 243

eosine G and Y, rec assay in B. subtilis, 165
epibromo-, epichloro- and epifluorohydrine, in Klebsiella pneumoniae, 413

-, erythrosine, rec assay in B. subtilis, 165

- N-ethylmaleimide, in ethyl methanesulphonate- and γ-radiation-treated Bracon hebetor, 175
- —, ethyl methanesulphonate, assay system using the thymidine kinase locus in mouse lymphoma cells, 77

-, -, in Bracon hebetor, 175

-, -, in B. subtilis, 165

-, -, in D. discoideum, effect of caffeine, 318

Mutagen, ethyl methanesulphonate (continued)

-, -, in D. melanogaster spermatozoa, dosimetry, 203

- -, -, in Mesocricetus auratus, 215
- -, -, in mice, uterine dissection, 425

—, —, in Oryza sativa, 279

-, -, in Podospora anserina, 417

, -, storage of barley seeds treated with, 35
 , N-ethyl-N-nitrosourea, effects on Chlorella cells, 265

—, —, in Pogonatum aloides, 141

—, fast blue RR, rec assay in B. subtilis, 165 —, fast green FCF, rec assay in B. subtilis, 165

-, ferrous sulphate, in Glycine max, 151

- —, gentian violet B, rec assay in B. subtilis, 165
- —, glutathione, in ethyl methanesulphonateand γ -radiation-treated *Bracon hebetor*, 175
- —, guanine, photoenzymatic repair in E. coli, 121
- —, hycanthone methanesulphonate, assay system using the thymidine kinase locus in mouse lymphoma cells, 77
- —, hydrazine, in *D. melanogaster*, 363 —, —, in mammalian test systems, 189

-, hydroxylamine, in B. subtilis, 165

-, -, in D. melanogaster, 363

- —, p-hydroxymercuribenzoate, in ethyl methanesulphonate- and γ-radiationtreated Bracon hebetor, 175
- , indigo carmine, rec assay in B. subtilis, 165
 , inosine, photoenzymatic repair in E. coli,
 121
- -, 2-iodoethanol-1, in Klebsiella pneumoniae, 413
- iron dextran, in human cell cultures, 332
 isoniazid, in human chromosomes, 337
- -, in mammalian test systems, 189
- isopropyl methanesulphonate, in mouse spermatogonia, 297
- —, —, storage of barley seeds treated with, 35 —, Janus green B, rec assay in B. subtilis, 165

—, kalibor, rec assay in B. subtilis, 165

- -, kanamycin, rec assay in B. subtilis, 165
- , lead, in human peripheral lymphocytes, 401
 , , , increased level of, chromosome analysis
- of human blood, 407
 —, light green SF, rec assay in B. subtilis, 165
- —, lincomycin, rec assay in B. subtilis, 165
 —, 6-mercaptopurine, photoenzymatic repair in E. coli, 121
- —, mercuric chloride, in human cell cultures,
- —, mercury chloride, rec assay in B. subtilis,

—, metallic salts, in Glycine max, 151

- —, metal salt, damage in human cell cultures,
- —, methylazoxymethanol acetate, in HeLa cells
- —, methylene blue, rec assay in B. subtilis, 165
 - -, methyl green, orange and yellow, rec assay in B. subtilis, 165
- —, methyl methanesulphonate, in mouse spermatogonia, 297

Mutagen (continued)

-, N-methyl-N'-nitro-N-nitrosoguanidine, in B. subtilis, 165

-, -, in Podospora anserina, 417

-, -, rapid method for complementation testing of UV-sensitive mutants of S. coelicolor, 27

-, N-methylnitrosourea, in Pogonatum aloides,

141

-, -, storage of barley seeds treated with, 35 -, methylphosphate, in Klebsiella pneumoniae,

-, 6-methylpurine, photoenzymatic repair in E. coli, 121

-, mitomycin C, in B. subtilis, 165

- —, —, with metallic salts in Glycine max, 151
- -, nalidixic acid, rec assay in B. subtilis, 165 -, naphthol yellow, rec assay in B. subtilis, 165
- -, new coccine, rec assay in B. subtilis, 165
- -, nickel oxide, in human cell cultures, 332
- —, nickel powder, in human cell cultures, 332 -, nitrogen mustard, in D. discoideum, effects
- of caffeine, 318 -, -, followed by caffeine, in Proteus mirabilis
- —, 4-nitroquinoline 1-oxide, in B. subtilis, 165

-, -, in Xeroderma pigmentosum, 420

-, N-nitrosomethylurea, in Chinese hamster cells, 89

-, -, in *Oryza sativa*, 279

-, N-nitroso-N-methylurethane, in Podospora anserina, 417

-, -, rec assay in B. subtilis, 165

- -, nitrotetrazorium blue, rec assay in B. subtilis, 165
- -, oil orange SS, rec assay in B. subtilis, 165
- -, oil red XO, rec assay in B. subtilis, 165 -, oil yellow OB, rec assay in B. subtilis, 165
- —, orange I, rec assay in B. subtilis, 165 —, penicillin, rec assay in B. subtilis, 165
- -, phenolphthalein, rec assay in B. subtilis, 165 —, phenol red, rec assay in B. subtilis, 165

-, phloxine, in E. coli, 165

- -, phosphate buffer, effect on response in N. crassa to UV, 243
- -, Ponceau R, 3R and SX, rec assay in B. subtilis, 165
- -, pontacyl green B, rec assay in B. subtilis, 165
- -, potassium dihydrogen orthophosphate, in UV-exposed N. crassa, 243
- -, propyl methanesulphonate, in mouse spermatogonia, 297
- —, —, storage of barley seeds treated with, 35 —, purine, photoenzymatic repair in E. coli, 121
- —, rhodamine B and 6G, rec assay in B. subtilis,
- —, rose bengal, rec assay in B. subtilis, 165

--, sodium acetate, in human peripheral lymphocytes, 407

- —, sodium arsenite, arsenate, tellurite, selenite, selenate, metavanadate and orthovanadate, in human cell cultures, 332
- —, sodium tetraphenylborate, rec assay in B. subtilis, 165

Mutagen (continued)

- —, streptomycin, rec assay in B. subtilis, 165
- -, Sudan III, rec assay in B. subtilis, 165
- —, sunset yellow FCF, rec assay in B. subtilis,
- —, tartrazine, rec assay in B. subtilis, 165
- —, thymidine, hypoxanthine, methotrexate and glycine, assay system using the thymidine kinase locus in mouse lymphoma cells, 77

-, -, in phage T₄, 113

- --, thymine, in phage T4, 113 —, —, photoenzymatic repair in E. coli, 121
- —, toluidine blue, rec assay in B. subtilis, 165
- -, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane, in D. melanogaster, 157
- -, triethylphosphate, in Klebsiella pneumoniae, 413
- -, trimethylphosphate, antifertility activity in D. melanogaster, 327

-, -, in Klebsiella pneumoniae, 413

- -, 2,3,5-tris(ethylenimino)-1,4-benzoquinone, in mouse spermatogonia, 297
- -, tritiated thymidine, in HeLa cells, 381
- -, uracil, photoenzymatic repair in E. coli, 121 Mutator gene, induced X-linked lethals in D. melanogaster, 59

Nalidixic acid, rec assay in B. subtilis, 165 Naphthol yellow, rec assay in B. subtilis, 165 Neurospora crassa, effect of phosphate buffer on response to UV, 243

Newcastle disease virus, induced damage,

inhibition by interferon, 340 New coccine, rec assay in B. subtilis, 165

Nickel oxide, in human cell cultures, 332 Nickel powder, in human cell cultures, 332

Nitrogen mustard, in D. discoideum, effects of caffeine, 318

-, followed by caffeine, in Proteus mirabilis, 133

4-Nitroquinoline 1-oxide, in B. subtilis, 165

-, in Xeroderma pigmentosum, 420

- N-Nitrosomethylurea, in Chinese hamster cells, 89
- in Oryza sativa, 279
- N-Nitroso-N-methylurethane, in Podospora anserina, 417

, rec assay in B. subtilis, 165

Nitrotetrazorium blue, rec assay in B. subtilis,

Oil orange SS, rec assay in B. subtilis, 165 Oil red XO, rec assay in B. subtilis, 165

Oil yellow OB, rec assay in B. subtilis, 165

Oocytes, of Bracon hebetor, ethyl methanesulphonate and γ -irradiation, 175

, mature, of D. melanogaster, interchange

following X-irradiation, 49 Orange I, rec assay in B. subtilis, 165

Oryza sativa, subspecific differentiation, after mutagenic treatment, 279

Oxygen concentration, in ethyl methanesulphonate-treated and y-irradiated Bracon hebetor, 175

Penicillin, rec assay in B. subtilis, 165

Peritoneal cavity, of mouse, chemical mutagens

and phloxine, 165

Phage, VIr, of *Proteus mirabilis*, caffeine after UV and nitrogen mustard treatment, 133—, T4, lesions in gene 32 and thymidine

imbalance, 113

e

e

a

n

f

Phenolphthalein, rec assay in *B. subtilis*, 165 Phenol red, rec assay in *B. subtilis*, 165

Phloxine, in E. coli, 165

Phosphate buffer, effect on response in N. crassa to UV, 243

Photoenzymatic repair, of UV lesions, in DNA of E. coli, by single light, 121

Photoreactivating enzyme activity, in *E. coli* strains, 345

Photoreactivation, irradiation-induced mutation in *E. coli* strains, 13

Photorepair, in UV-induced N. crassa exposed in phosphate buffer, 243

Plasma, hamster, bioassay for chemical mutagens, 215

Podospora anserina, use of spermatia in production of mutants, 417

Pogonatum aloides, N-ethyl- and N-methylnitrosourea, 141

Ponceau R, 3R and SX, rec assay in B. subtilis,

Pontacyl green B, rec assay in B. subtilis, 165 Porphyrin, erythrocyte, in chromosome analysis of policemen with increased blood lead level, 407

Potassium dihydrogen orthophosphate, in UV-exposed N. crassa, 243

Propyl methanesulphonate, in mouse spermatogonia, 297

—, storage of barley seeds treated with, 35 Proteus mirabilis, caffeine after UV and nitrogen mustard treatment, 133

Prototrophy, in E. coli, effect of broth on UV-induced mutation, 225

Purine, photoenzymatic repair in E. coli, 121

Quasi-bivalents, formed by heterologous interchange in *D. melanogaster*, behaviour of, 222

Rabbit, interferon, inhibition of virus-induced chromosome damage, 340

Rat, bone marrow, method for preparing anaphase figures, 111

Rec assay, procedures for screening chemical mutagens, 165

Rhodamine B and 6G, rec assay in B. subtilis, 165

Root meristems, of *V. faba*, 5-aminouracilsynchronized, aberrations induced by diepoxybutane, 41

Rose bengal, rec assay in B. subtilis, 165

Saccharomyces cerevisiae, epistatic interactions between four rad loci, 353

Salmonella typhimurium, dichlorvos, 413

-, isoniazid and hydrazine in mammalian test systems, 189

Schizosaccharomyces pombe, UV-induced replicating instability, 249

Seeds, of barley, storage of, treated with propyl and isopropyl methanesulphonate, 35

—, of Glycine max, metallic salts, 151

Sendai virus, induced damage, inhibition by interferon, 340

Sex, -linked lethals in D. melanogaster, mutator gene-induced, 59

Single light flashes, repair of UV lesions in E. coli, 121

Sodium acetate, in human peripheral lymphocytes, 407

Sodium arsenite, arsenate, tellurite, selenite, selenate, metavanadate and orthovanadate, in human cell cultures, 332

Sodium tetraphenylborate, rec assay in B. subtilis, 165

Soy-bean, metallic salts, 151

Spermatia, used in production of mutants in *Podospora anserina*, 417

Spermatocytes, of *D. melanogaster*, mutagen specificity, 363

Spermatogonia, of *D. melanogaster*, mutagen specificity, 363

—, mouse, chemical mutagens, 297

Spermatozoa, of *D. melanogaster*, dosimetry of ethyl methanesulphonate, 203

—, —, transmutation of carbon-14 within DNA of, 195

 X-irradiated, of D. melanogaster, effects of treating females with actinomycin-D, 65

Spontaneous mutability, mutation frequency in UV-irradiated Chinese hamster cells, 301
Spontaneous mutation in E coli strains, 12

Spontaneous mutation, in E. coli strains, 13
—, mutator gene-induced X-linked lethals in D. melanogaster, 59

Spores, mature, of *Pogonatum aloides*, N-ethyland N-methylnitrosourea, 141

Storage, of barley seeds, treated with propyl and isopropyl methanesulphonate, 35

Streptomyces coelicolor, rapid method for complementation testing of UV-sensitive mutants, 27

Streptomycin, rec assay in *B. subtilis*, 165 Sudan III, rec assay in *B. subtilis*, 165 Sunset yellow FCF, rec assay in *B. subtilis*, 165

Tartrazine, rec assay in B. subtilis, 165 Temperature, low, in ethyl methanesulphonateand γ -radiation-treated $Bracon\ hebetor$, 175 Testes, hamster, bioassay for chemical

mutagens, 215

Thymidine, hypoxanthine, methotrexate and glycine, assay system using the thymidine kinase locus in mouse lymphoma cells, 77

—, in phage T₄, 113 —, tritiated, in HeLa cells, 381

Thymidine kinase locus, in mouse lymphoma cells, used in mutational assay system, 77

Thymine, in phage T4, 113

—, photoenzymatic repair in *E. coli*, 121 Toluidine blue, rec assay in *B. subtilis*, 165 1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane,

in D. melanogaster, 157

Triethylphosphate, in Klebsiella pneumoniae,

Trimethylphosphate, antifertility activity in D. melanogaster, 327

-, in Klebsiella pneumoniae, 413

2,3,5-Tris(ethylenimino)-1,4-benzoquinone, in mouse spermatogonia, 297

Tuberculostatic agent, isoniazid, in mammalian test systems, 189

Uracil, photoenzymatic repair in E. coli, 121 Uterine dissection, dominant lethals in mice after ethyl methanesulphonate, 425

Vesicular stomatitis virus, induced damage, inhibition by interferon, 340

Vicia faba, diepoxybutane in 5-aminouracilsynchronized root meristems of, 41

Virus, induced chromosome damage, inhibition by interferon, 340

Wasp, ethyl methanesulphonate and γ -irradiation, 175

Xeroderma pigmentosum, lymphocytes, 4-nitroquinoline 1-oxide, 420

Yeast, epistatic interactions between four rad loci, 353

-, fission, UV-induced replicating instability, 249